

U.S. Patent Application Serial No.10/524,211
Response filed January 16, 2009
Reply to OA dated July 17, 2008

REMARKS

By the present amendment, independent claim 1 has been amended to obviate the examiner's objections thereto and/or to further clarify the concepts of the present invention. Entry of these amendments is respectfully requested.

In the Office Action, claim 1 was objected to as containing an alleged informality in terms of the language of a noted phrase. In response, claim 1 has been amended as suggested by the examiner. Withdrawal of the objection is requested.

Claims 1, 2 and 5 again were rejected under 35 USC § 103(a) as being unpatentable over the patent to Usui in view of the patent publication to Munro et al. In making this rejection, it was asserted that the former patent teaches the entire heat-generating body as set forth in the noted claims with the exceptions of (1) the recited difference between critical moisture values (claim 1) and (2) the inclusion of an organic filling agent in the hydrophilic gel agent of the adhesive portion (claim 2). The latter Munro et al publication was relied upon for supplying both of these teaching deficiencies. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

Before discussing the rejection in detail, a brief review of the presently claimed invention may be quite instructive. Claim 1 as amended relates to a heat-generating body comprising a heat-

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generating portion formed by sealing a heat-generating composition causing an exothermic reaction in the presence of air in an air-permeable container. The heat-generating body further includes an adhesive portion formed by comprising, as a main component, a water-containing hydrophilic gel agent obtained from a hydrophilic polymeric thickening agent. An important feature of the presently claimed invention is that a difference between critical moisture values of the heat-generating portion and the adhesive portion is 2% or less.

As apparent from Table 4 of the present specification, when the difference between the critical moisture values is "2% or less" as in embodiments 1 to 3 of the specification, there is no transfer of moisture between the adhesive portion and the heat-generating portion, and a heat-generating body having excellent heat-generating characteristics and adhesive property can be obtained. When the difference between the critical moisture values is 6% to 10% as in comparative Examples 1 to 3, however, there is transfer of moisture between the adhesive portion and the heat-generating portion, and the heat-generating characteristics and adhesive property are deteriorated. It is submitted that such a heat-generating body is not taught or suggested by the cited patent publications to Usui and Munro et al, whether taken singly or in combination.

More particularly, it was urged in the last response that an important feature of the presently claimed invention was that a difference between critical moisture values of the heat-generating portion and the adhesive portion were 2% or less. In support of the assertion that the Usui and Munro et al patent publications did not teach this important feature of a difference between critical

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moisture values of the heat-generating portion and the adhesive portion being 2% or less, the Declaration under 37 CFR § 1.132 of Mr. Urume was submitted. The Declaration set forth measurements formulations according to the Munro et al publication in that the critical moisture value of the adhesive of formulations in the Examples 5 and 6 of the Munro et al patent publication were 68%, 56% and 54%, respectively.

Thereafter, was asserted that the critical moisture value of a conventional heat-generating portion is 80% to 95% and, even if the adhesive in the Munro et al publication was substituted in the heat generating device of the Usui patent, the difference between the critical moisture values is as high as "12% or higher." From this it was concluded that the difference between the critical moisture values of 2% or less is not taught or suggested by the patent publications to Usui and Munro et al.

In the subject Action, it was asserted, in response to the above presentation as contained in the Declaration, that there has been no evidence submitted as the moisture value in the modified heat-generating body according to the Usui patent.

However, as was set forth previously, neither publication teaches a difference between critical moisture values of 2% or less. It is considered improper to assert that one of ordinary skill would achieve the recited difference between the critical moisture values of 5% or less without such a teaching, since the teaching deficiency of the cited art could only have been supplied using a

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prohibited hindsight reconstruction from applicants' own disclosure that the difference between the critical moisture values is 2% or less.

In further support of the above, it can be assumed that device according to the Usui patent has an inherent moisture value, and thus the value for the device of the Usui patent so that a difference can be calculated. Therefore, applicants submit evidence in the form of a Declaration under 37 CFR § 1.132 of Mr. Kimura which presents experimental evidence regarding the compositions according to the prior art Usui patent which also shows an unexpected or surprising result for the claimed compositions relative to the compositions according to the cited patent publications which thus would tend to demonstrate the unobviousness of the claimed subject matter. Furthermore, the moisture values for additional examples in accordance with the Munro et al publication are also provided in the Declaration so as to give an accurate comparison.

More specifically, enclosed is a Declaration dated January 16, 2009, which, as explained below, provides further significant evidence in terms of the data measured data and as is detailed in the Declaration. As was confirmed by the Declaration submitted on May 2, 2008, and the enclosed Declaration that the critical moisture value of the adhesive (examples 3 to 10) disclosed in the Munro et al patent is 79% or less, and the critical moisture value of heat-generating agent disclosed in the Usui et al publication is 88% or higher.

As a result, even if the adhesive whose critical moisture value is 79% or less and the heat-generating agent whose critical moisture value is 88% or higher are combined, the difference

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between them becomes 9% or higher. Therefore, the heat generating body according to the presently claimed invention which has the feature of a difference of 2% or less between critical moisture values of the adhesive portion and the heat-generating portion is not taught or suggested by the patent publications to Usui et al and Munro et al, either singly or in combination.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claims 1, 2 and 5, as amended, over the cited patent publications are respectfully requested.

Claims 3 and 4 were rejected under 35 USC § 103(a) as being unpatentable over the same patent publications to Usui and Munro et al as above, further in view of the patent publication to Otsuka et al. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

Inasmuch as both of these claims are dependent upon independent claim 1, it would appear that the same consideration as were set forth above regarding the initial rejection are applicable to this rejection as well.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claims 3 and 4, as amended, over the cited patent publications are respectfully requested.

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In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

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Enclosures: Petition for Extension of Time
Declaration under 37 CFR 1.132 (with data sheets)